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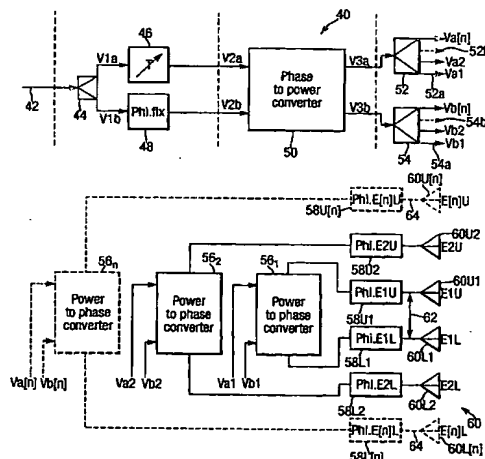
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(54) Title: PHASED ARRAY ANTENNA SYSTEM WITH VARIABLE ELECTRICAL TILT



(57) Abstract: A phased array antenna system with variable electrical tilt comprises an array (60) of antenna elements (60L1) etc. incorporating a divider (44) dividing a radio frequency (RF) carrier signal into two signals between which a phase shifter (46) introduces a variable phase shift. A phase to power converter (50) converts the phase shifted signals into signals with powers dependent on the phase shift. Power splitters (52, 54) divide the converted signals into two sets of divided signals with total number equal to the number of antenna elements in the array. Power to phase converters (56<sub>1</sub>), etc. combine pairs of divided signals from different power splitters (52, 54): this provides vector sum and difference components with appropriate phase for supply to respective pairs of antenna elements (60U1, 60L1) etc. located equidistant from an array centre. Adjustment of the phase shift provided by phase shifter (46) changes the angle of electrical tilt of the antenna array (60).



*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*